

UNITED STATES PATENT AND TRADEMARK OFFICE
CERTIFICATE OF CORRECTION

PATENT NO. : 7,424,856 B2
APPLICATION NO. : 10/525565
DATED : September 16, 2008
INVENTOR(S) : Werner Brennwald et al.

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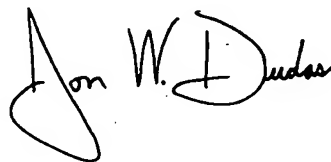
It is certified that error appears in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

The title page should be deleted to appear as per attached title page.

The sheets of drawings consisting of figures 1-13 should be deleted to appear as per attached figures 1-13.

Signed and Sealed this

Twenty-fifth Day of November, 2008

A handwritten signature in black ink, appearing to read "Jon W. Dudas". The signature is stylized with a large, looped initial "J" and a cursive "Dudas".

JON W. DUDAS
Director of the United States Patent and Trademark Office

(12) **United States Patent**
Brennwald et al.

(10) **Patent No.:** **US 7,424,856 B2**
(45) **Date of Patent:** **Sep. 16, 2008**

(54) **GRATE ELEMENT FOR A GRATE OF A
WASTE COMBUSTION INSTALLATION**

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Weber, Netstal (CH)**

(73) **Assignee:** **Von Roll Umwelttechnik AG (CH)**

(*) **Notice:** **Subject to any disclaimer, the term of this
patent is extended or adjusted under 35
U.S.C. 154(b) by 397 days.**

(21) **Appl. No.:** **10/525,565**

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(2), (4) **Date:** **Feb. 25, 2005**

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PCT Pub. Date: **Mar. 25, 2004**

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US 2005/0257723 A1 **Nov. 24, 2005**

(30) **Foreign Application Priority Data**

Aug. 29, 2002 (EP) **02405738**

(51) **Int. Cl.**
F23H 7/08 (2006.01)

(52) **U.S. Cl.** **110/281; 110/258; 110/291**

(58) **Field of Classification Search** **110/281;
110/257, 258, 267, 268, 282, 283, 284, 289;
110/290, 291, 296**

See application file for complete search history.

(56) **References Cited**

U.S. PATENT DOCUMENTS

4,170,183 A 10/1979 Cross
4,901,653 A • 2/1990 Baltzinger 110/281
5,197,397 A 3/1993 Yamagishi et al.

FOREIGN PATENT DOCUMENTS

CH	583 372	2/1977
DE	525 221	5/1931
DE	1 099 117	2/1961
EP	1 001 218 B1	5/2000
FR	2 265 041	10/1975

OTHER PUBLICATIONS

Max Künzli, W + E-Gegenlauf Überschiebrost, p. 1-17.

* cited by examiner

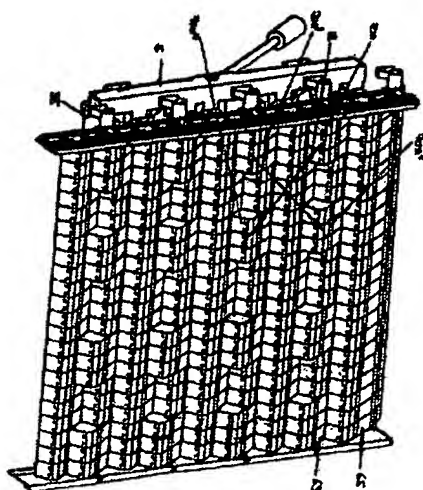
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LLC; Abe HersHKovitz**

(57) **ABSTRACT**

The present invention relates to a grate element (1) for a grate of a waste-incineration plant, having a plurality of rows of grate blocks, which are moveable or fixed, arranged one behind the other, a plurality of grate blocks (67) being arranged in each row of grate blocks. A first number of grate blocks arranged in a moveable row of grate blocks here is assigned to a first grate carriage (5), and a second number of grate blocks arranged in a moveable row of grate blocks is assigned to a second grate carriage (35), it being possible for the first number of grate blocks to be moved independently of the second number of grate blocks.

3 Claims, 7 Drawing Sheets



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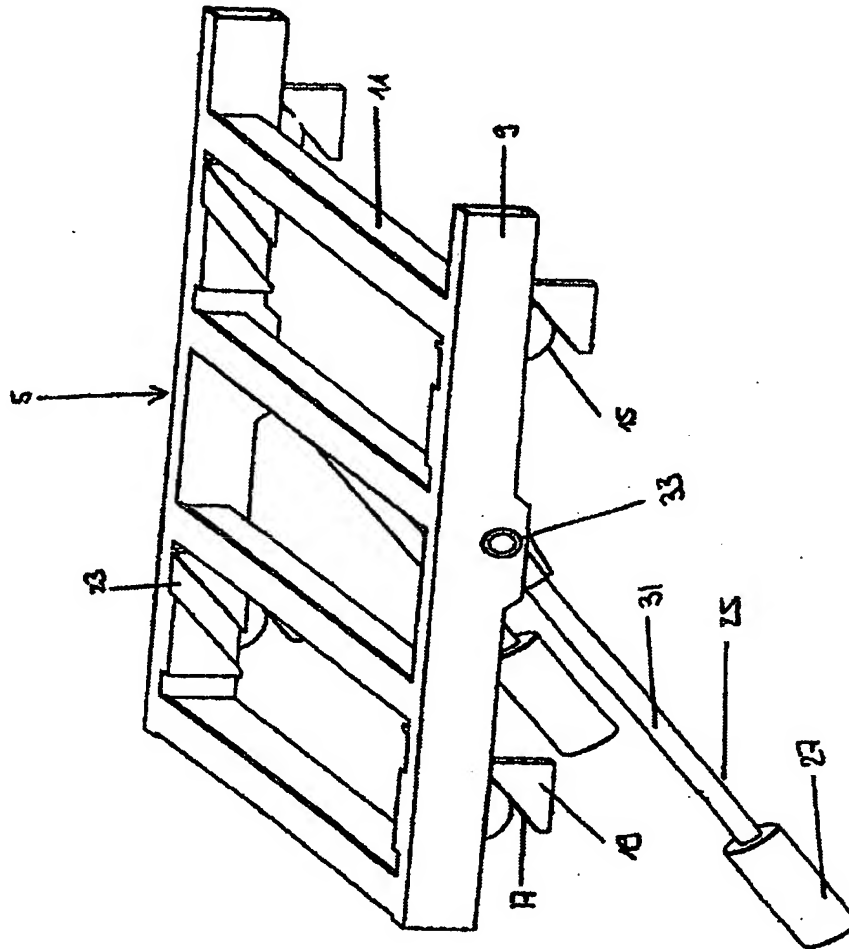


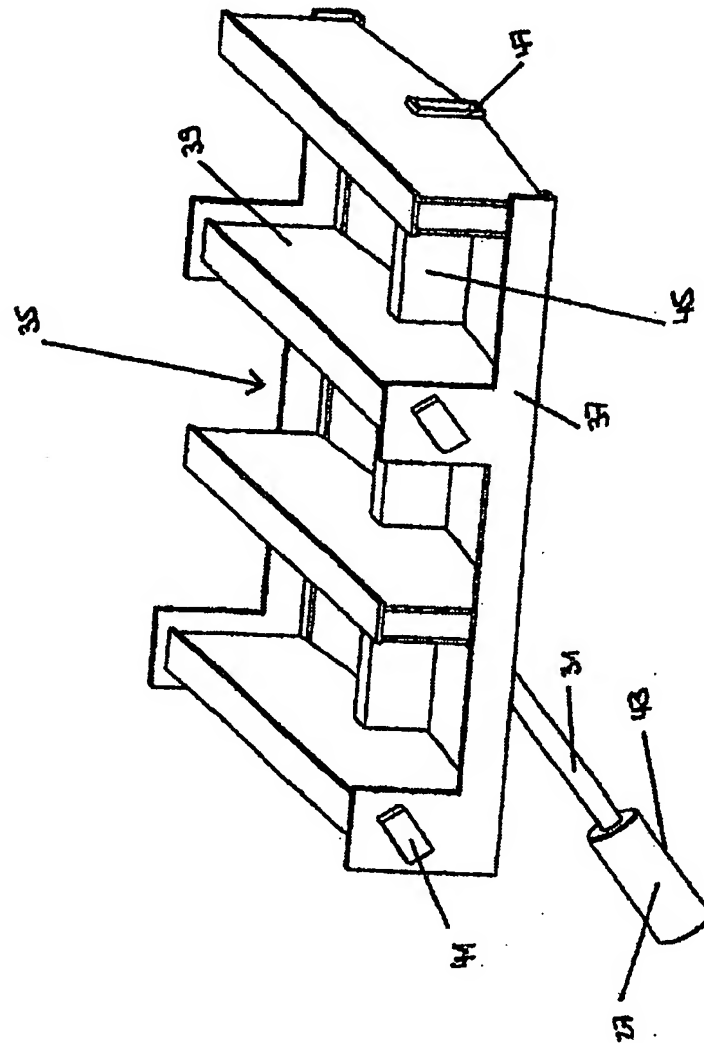
FIG. 1

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FIG. 2



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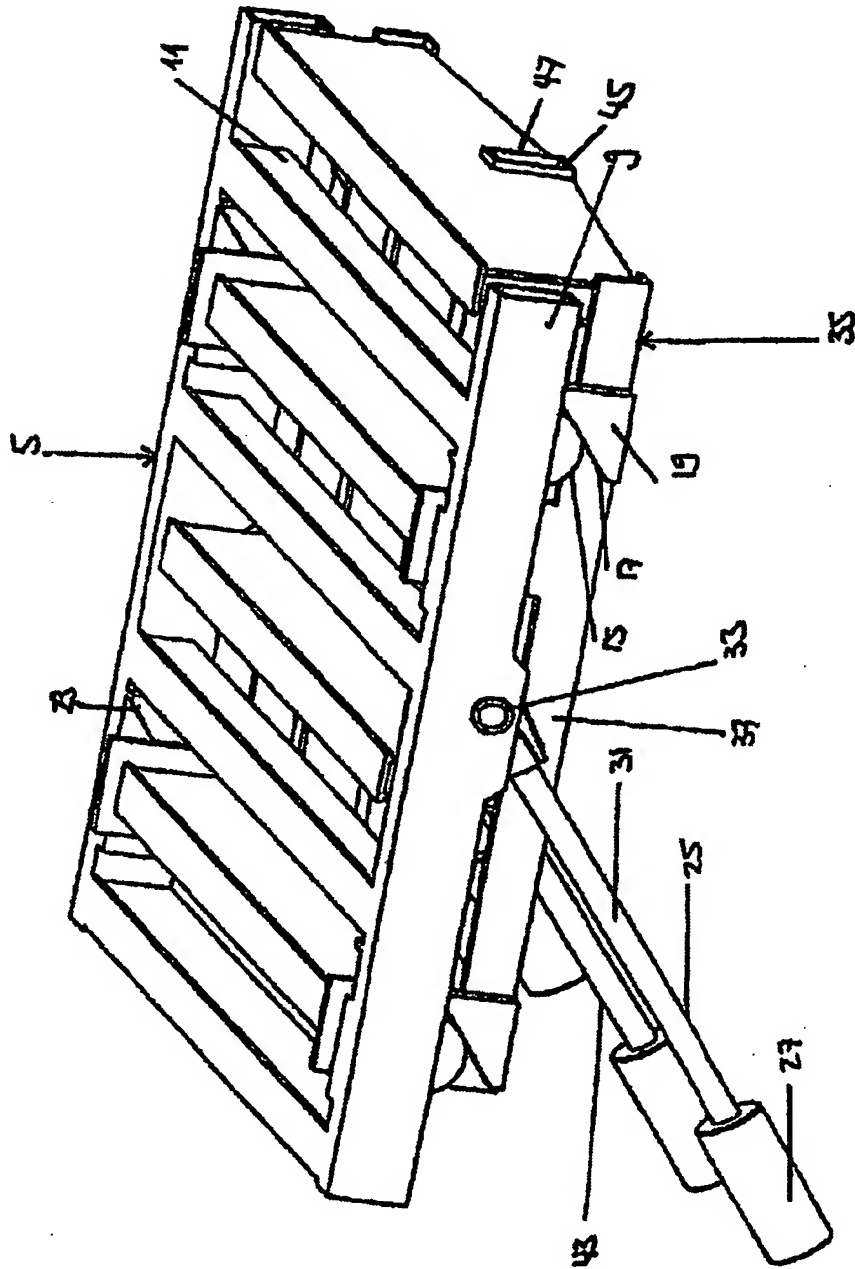


FIG. 3

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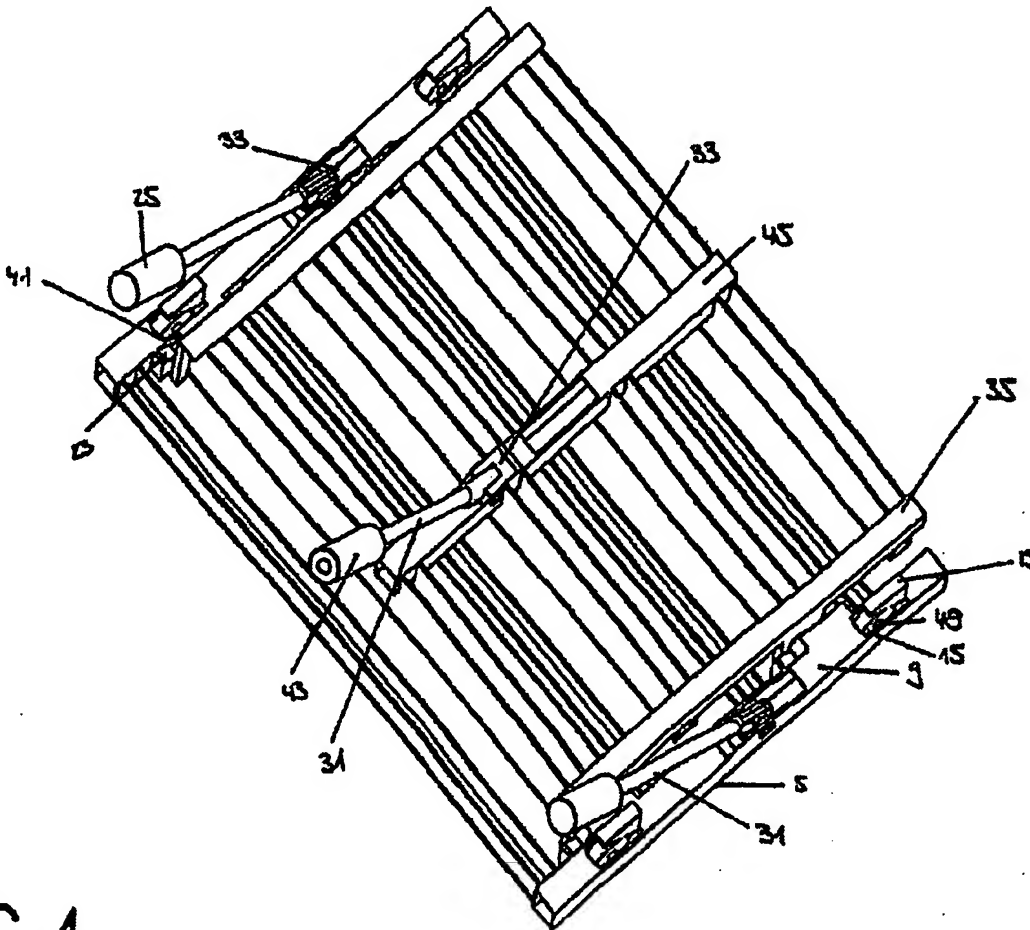


FIG. 4

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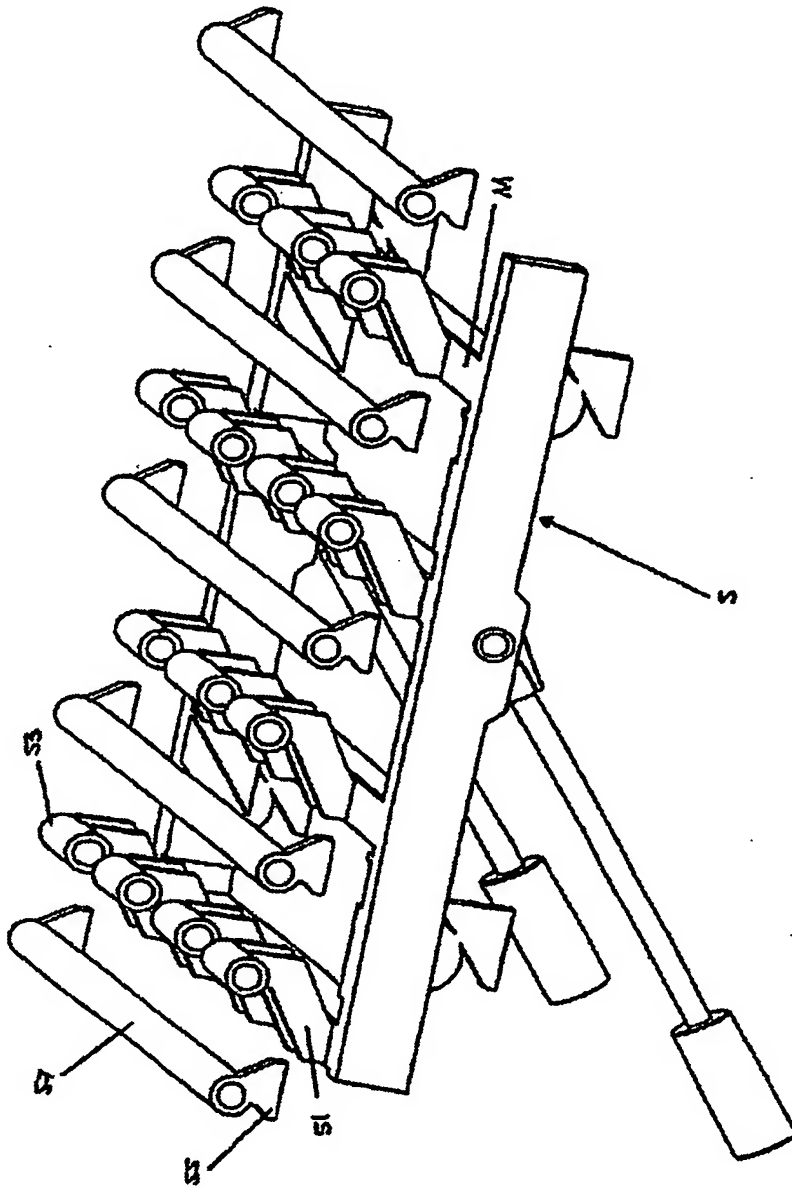


FIG. 5

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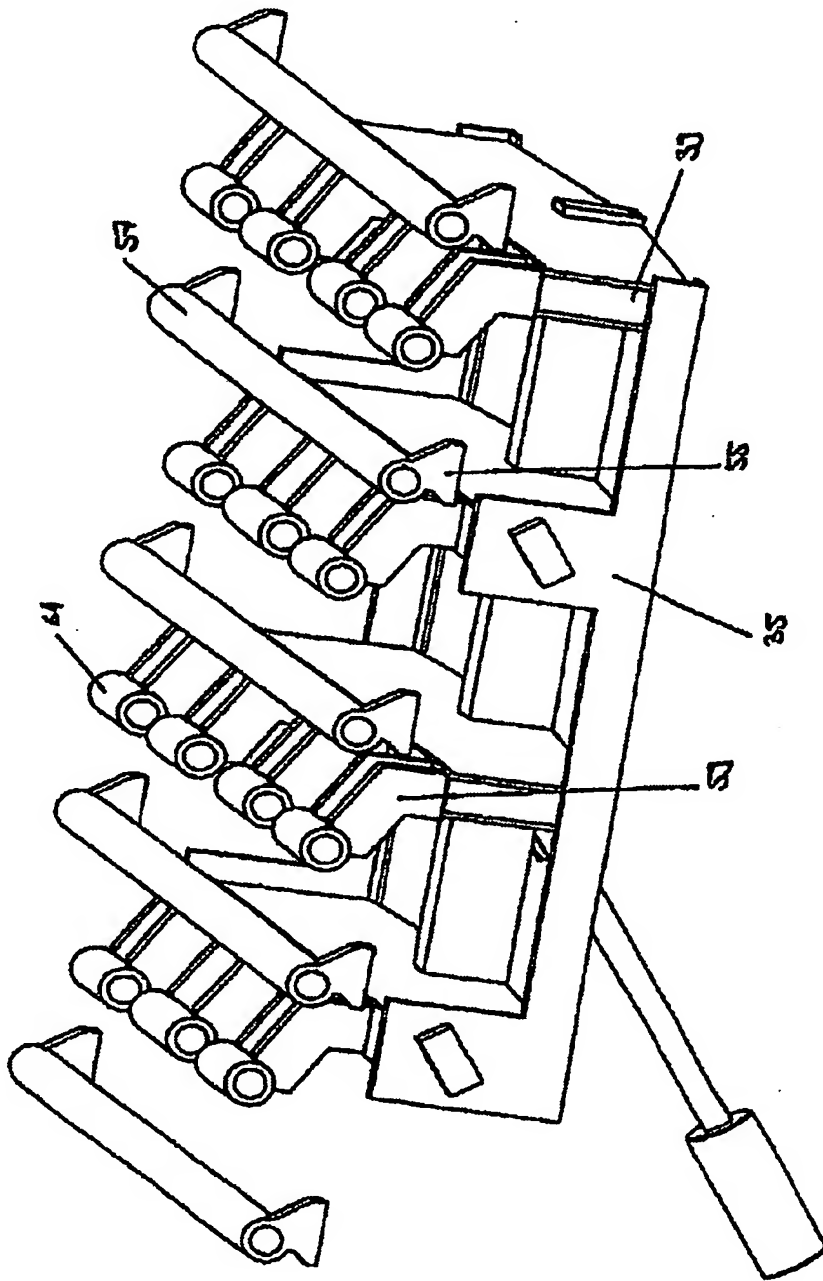


FIG. 6

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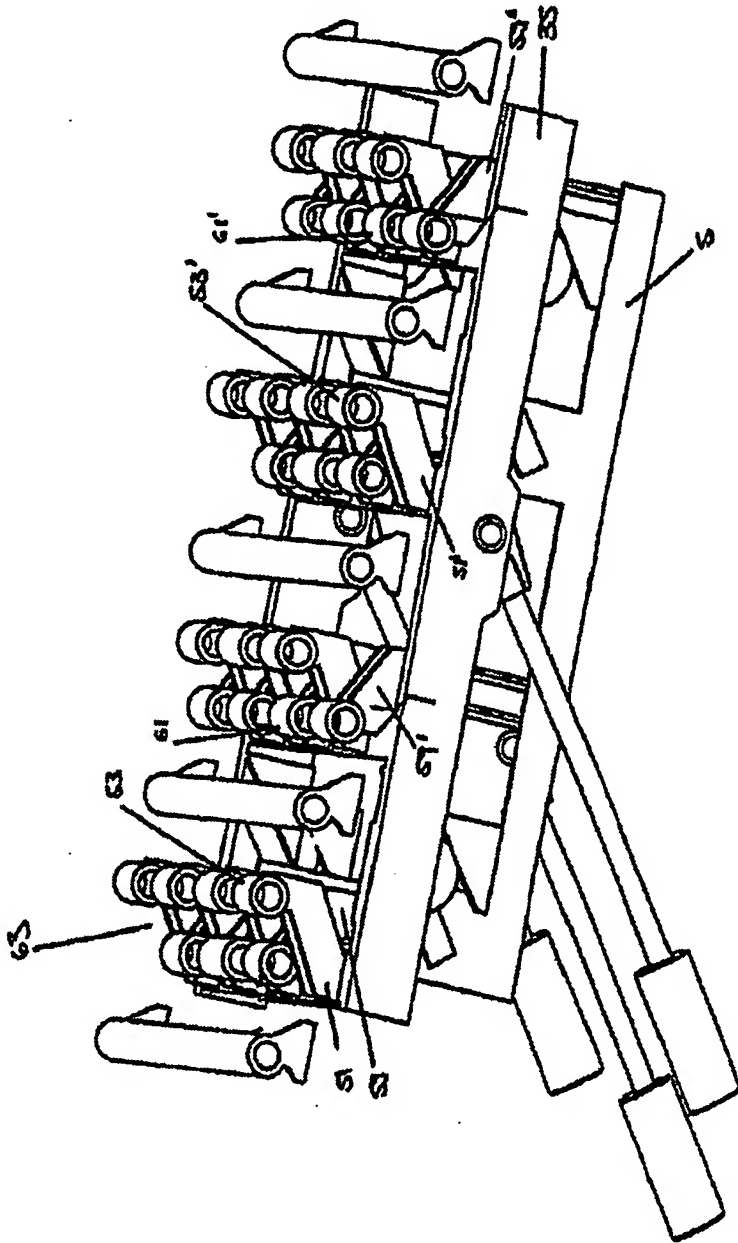


FIG. 7

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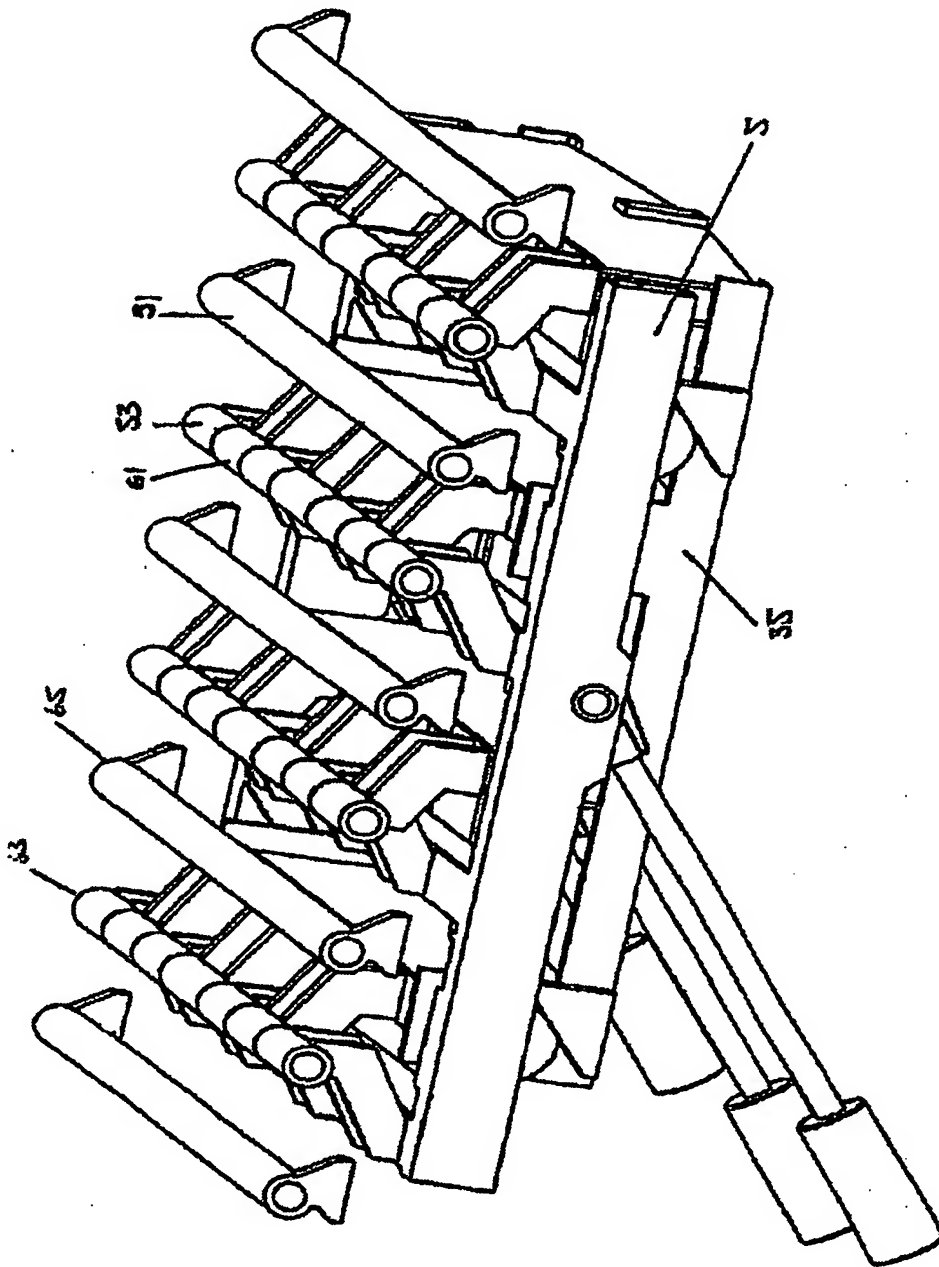


FIG. 8

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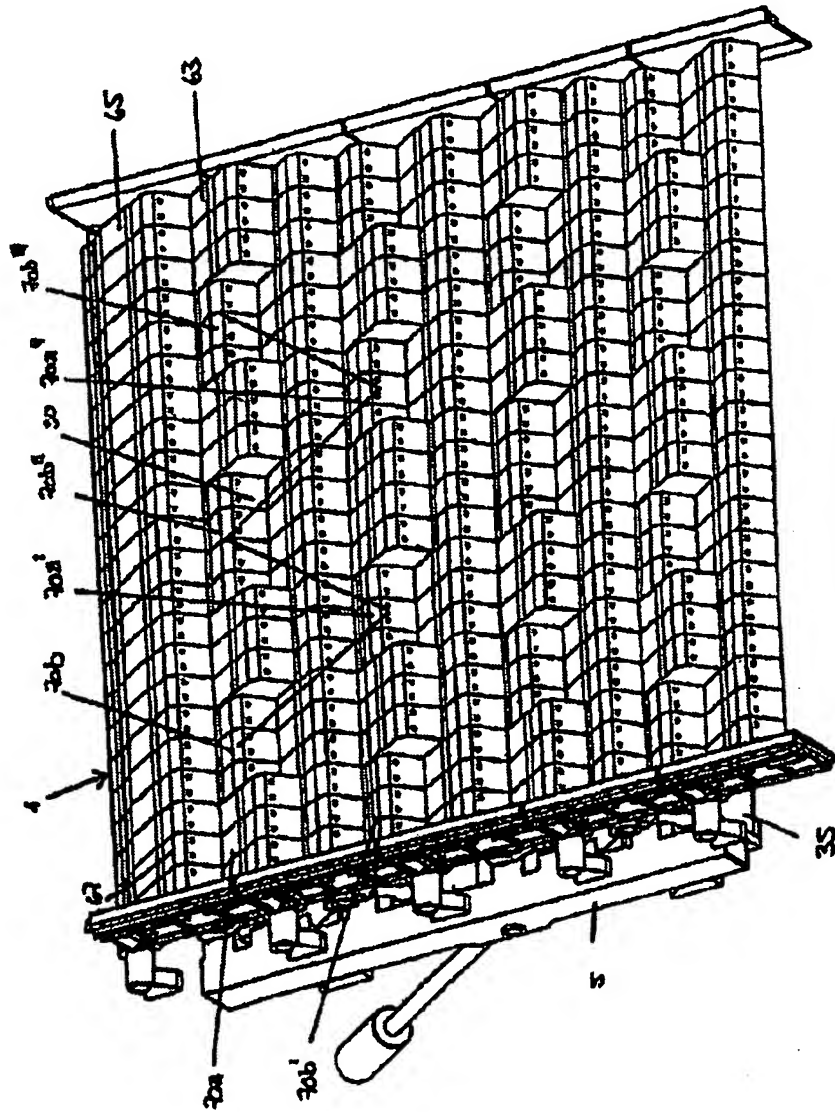


FIG. 9

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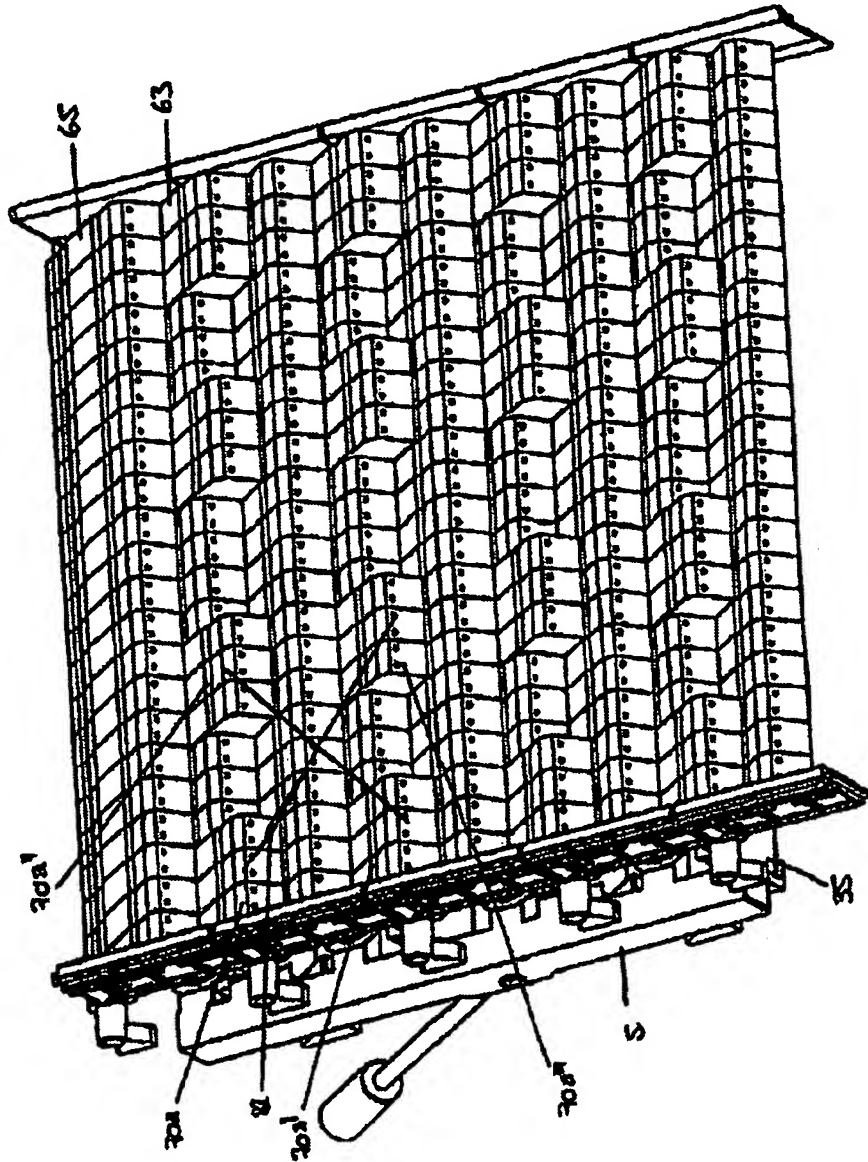


FIG. 11

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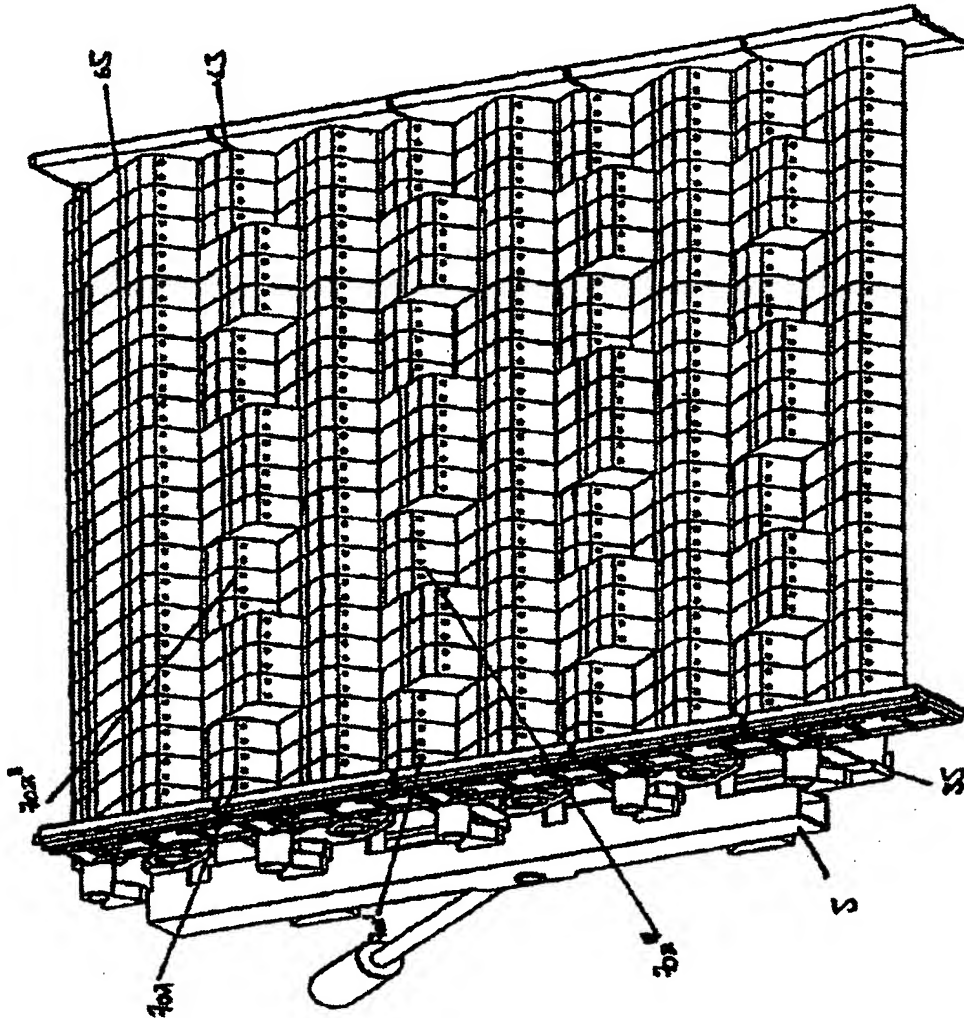


FIG. 12

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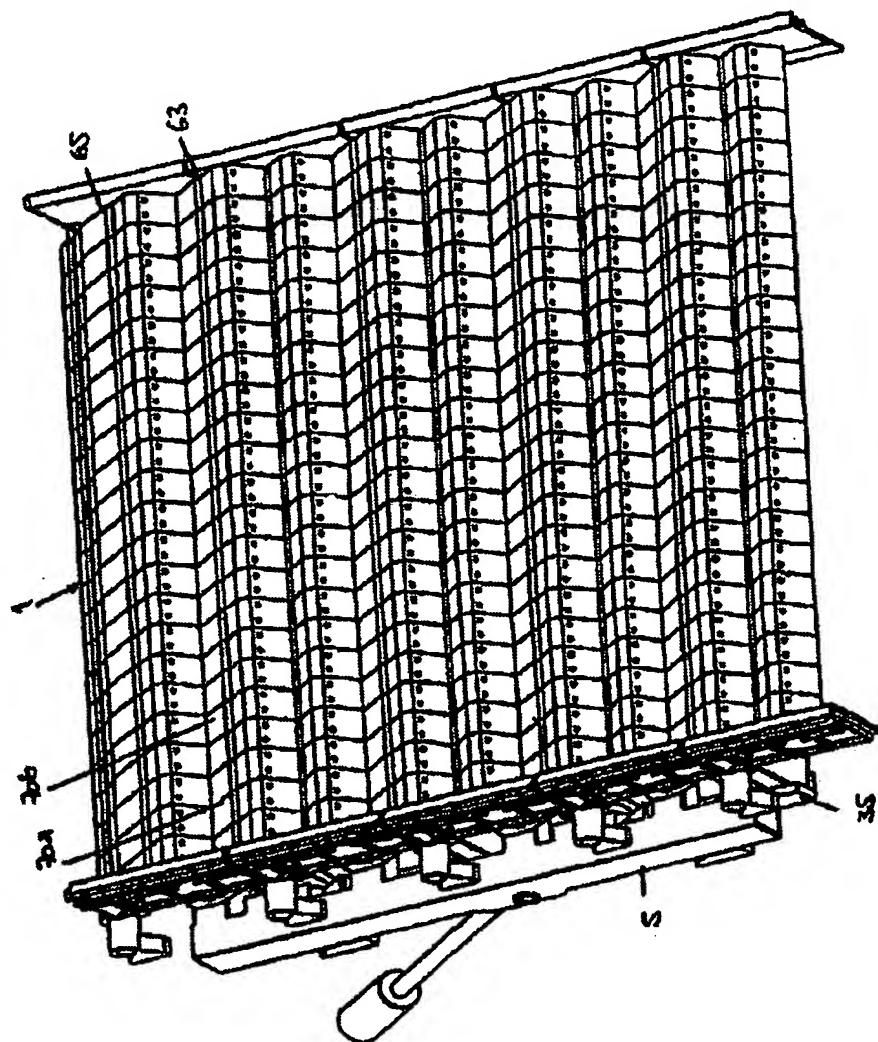


FIG. 13